

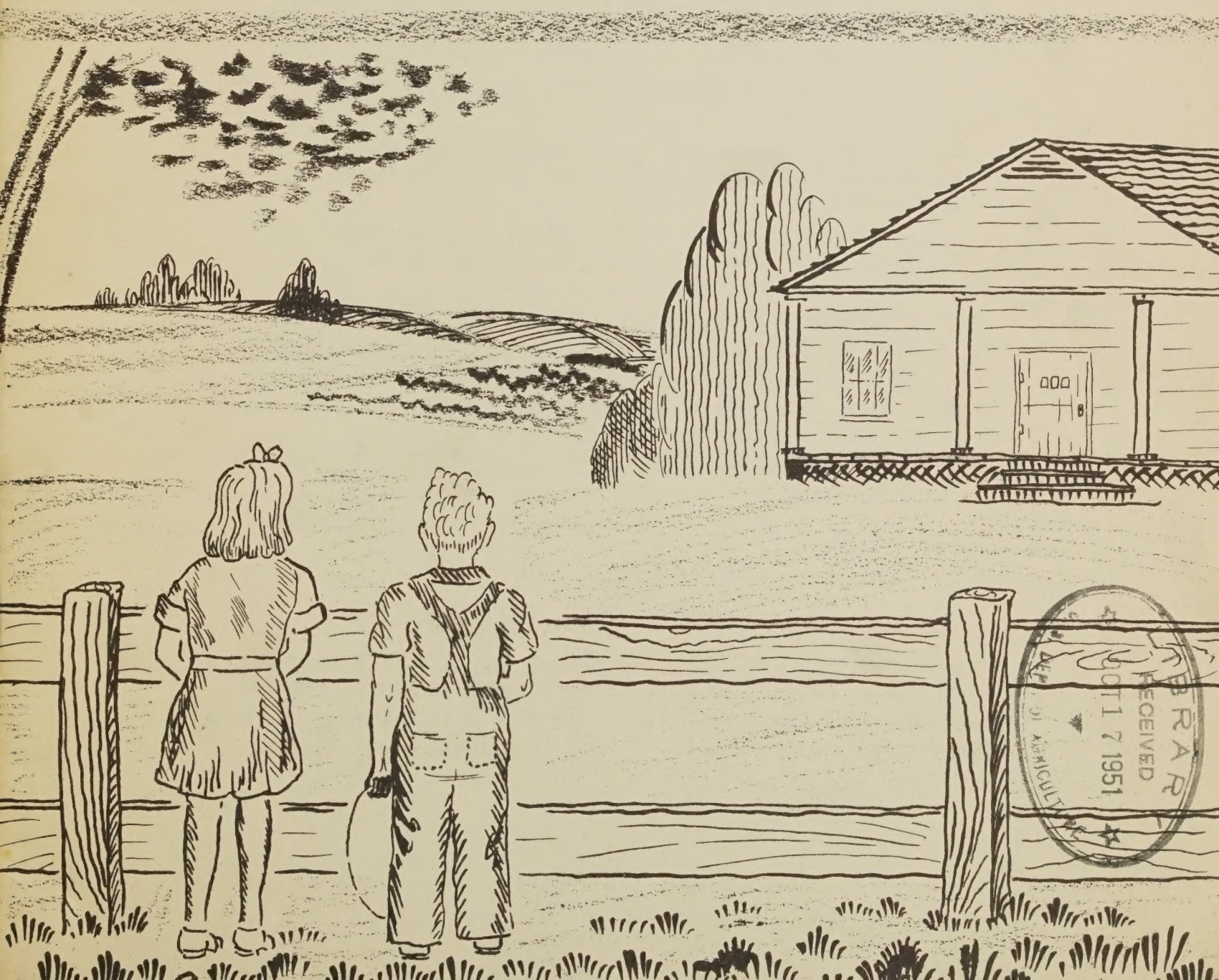
Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

1.6
So3Le

LET'S SAVE SOIL

WITH SAM AND SUE



UNITED STATES
DEPARTMENT OF AGRICULTURE
LIBRARY



WE, the
Alab
wish to ex
and organ

The J
Draughon
to suppor

Dean
workshop

BOOK NUMBER

1.6
So3Le

806471

ON

on Workshops,
1946 and 1947
following people

and Mr. Ralph
unds available

ning made the

The District Boards of Supervisors Soil Conservation Service, banks, industrialists, and various city and county boards of education which contributed funds for scholarships.

The various members of the College staff who cooperated in the workshop.

To numerous laymen, church workers, and personnel of different agencies who contributed so generously to make the programs a success.

Thanks are due Mr. O. C. Meadlock, State Soil Conservationist, and members of his staff who reviewed the manuscript and checked its accuracy.

Grateful acknowledgment is made to Dr. Paul Irvine and other members of the Research Interpretation Council who worked closely with the workshops on the readability and form.

Our appreciation is expressed to Dr. B. R. Showalter who critically evaluated the elementary booklet.

Our gratitude is expressed to Mr. Otto Hollaway, Director of the Workshop, for his untiring guidance.



Reproduced by the Soil Conservation Service, U. S. Department of Agriculture, Washington 25, D. C. with permission of the Director, Resource-Use Education, Alabama Polytechnic Institute, Auburn, Alabama. January 1951.

FOREWORD

MEMBERS of the Resource-Use Education Workshop at Alabama Polytechnic Institute during the summer 1946 prepared the tentative draft of these materials. The 1947 Workshop group revised and illustrated these materials. They have assumed that it is the responsibility of schools in a democracy to improve living. They have assumed that it is the responsibility of the school to actively participate in constructive community activities. The school must not only learn to use a community as an effective means of education; it must also render service to the community. There must be a two-way bridge between the school and other community agencies and services. This means the school will bring the personnel of other community agencies into the school and at the same time the school will go out into the community to work with other agencies on common problems.

The workshop has worked on the assumption that education must not content itself with the "what" but must also learn the "how". This stresses a "doing" education.

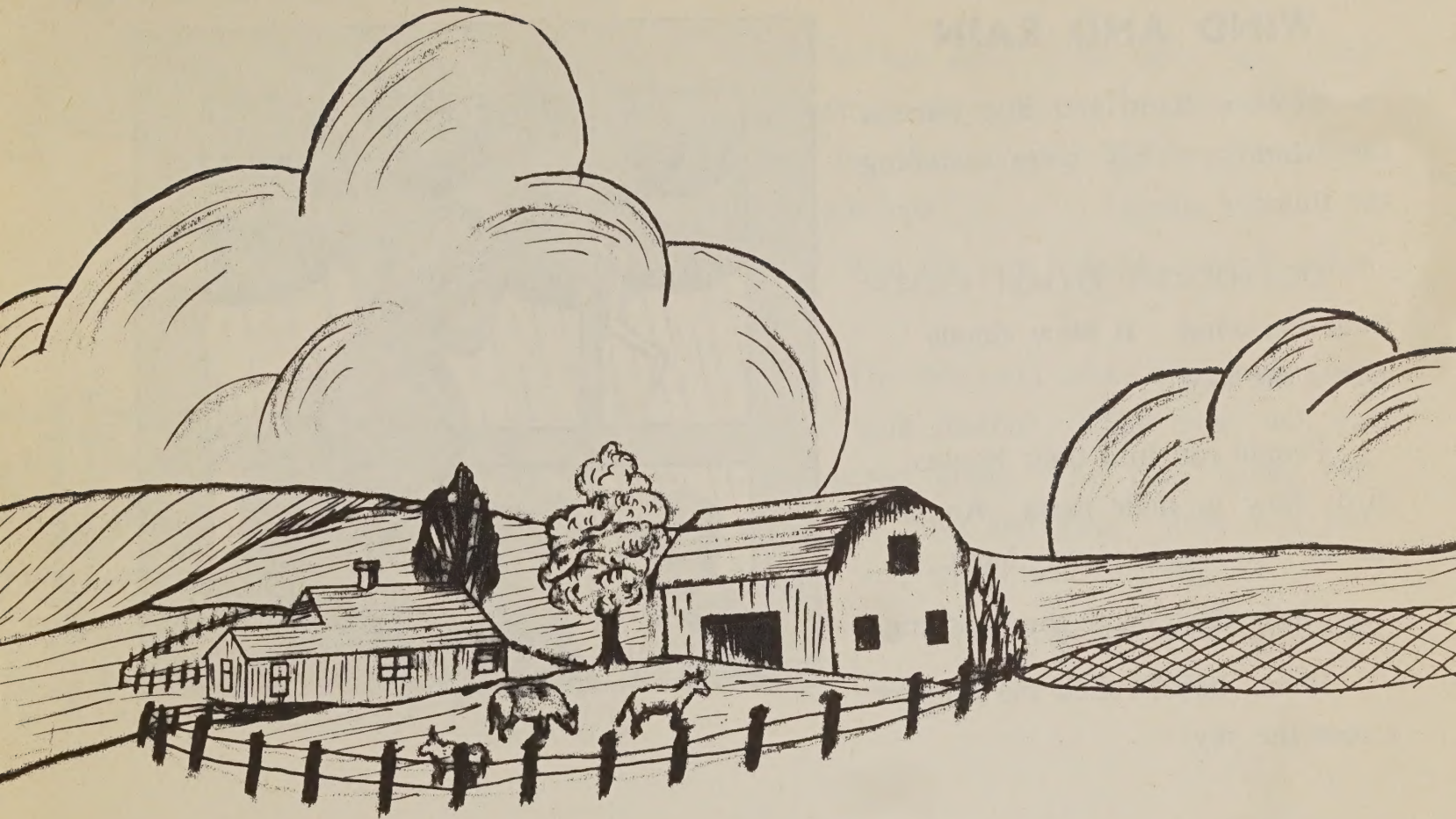
If these materials are used as ordinary reading material with no relationship to the school, home or the community, they will be of little value. These materials can be effectively used to develop an understanding of the inter-relationship and interdependence of the total environment and should stimulate an interest in a study of the local problems. It is hoped that they will stimulate interest in community problems which can be made an integral part of the school program.

Resource Education should begin at home. No school that does not first set its own house in order is justified in attempting to solve community problems of Resource-Use. Most teachers can begin in their own classroom by making it a better place in which to live. Teachers will find many Resource-Use problems around the school such as upkeep and repair of buildings; the landscaping; sodding of the yards; the control of erosion; school garden; the cannery; manual art shop; and many others.

If a school is to do its **best** work in the field of Resource Education it must have the support of all members of the faculty. The principal has an important responsibility in directing the program. The program cannot go much farther than the principal directs it.

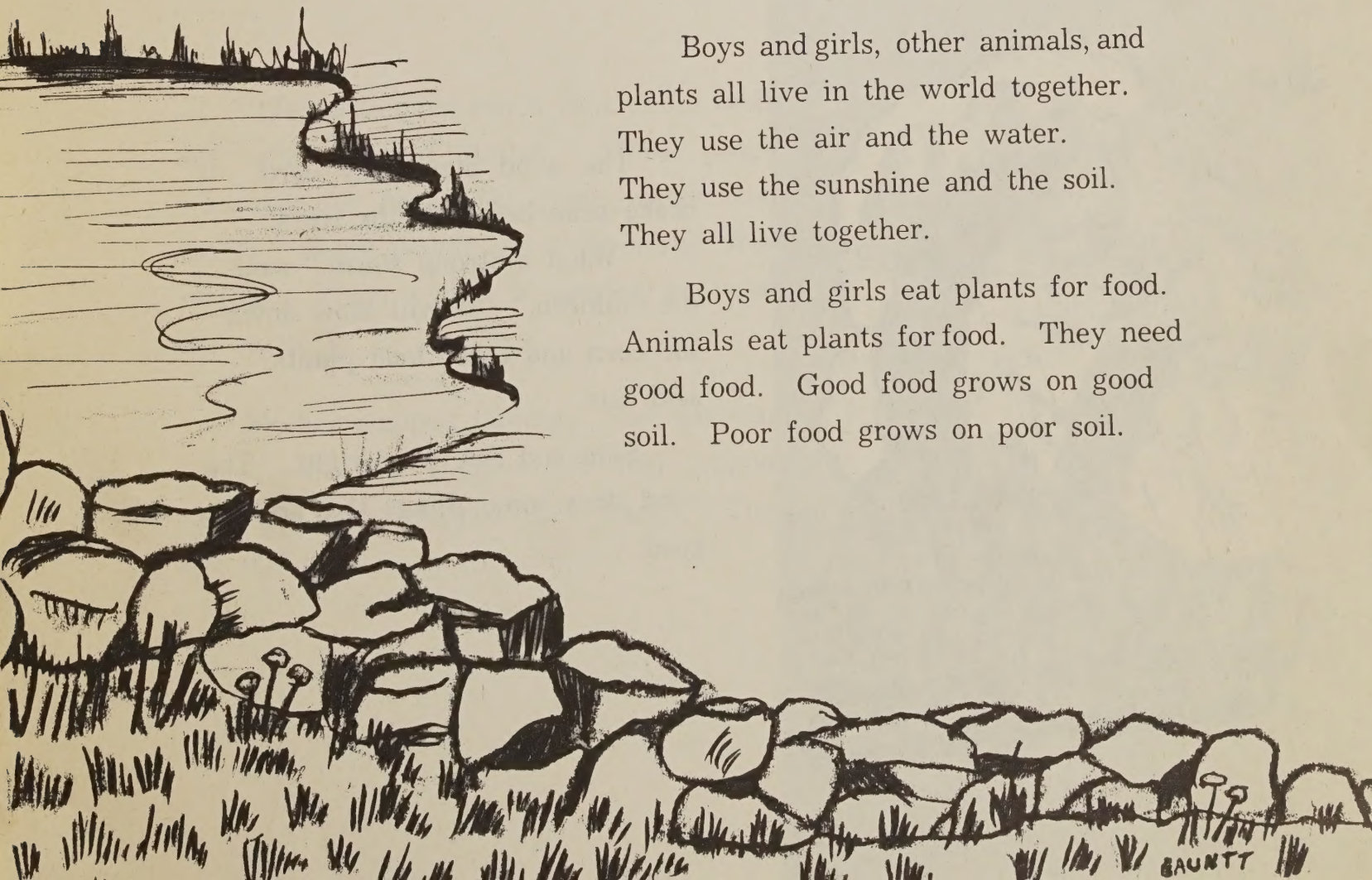
OTTO HOLLAWAY, Director





Boys and girls, other animals, and
plants all live in the world together.
They use the air and the water.
They use the sunshine and the soil.
They all live together.

Boys and girls eat plants for food.
Animals eat plants for food. They need
good food. Good food grows on good
soil. Poor food grows on poor soil.



WIND AND RAIN

Mother, Sam, and Sue were at the window. They were watching the thunder storm.

OO-O-OO-O-!! O-O-O-! O-O-O-! went the wind. It blew clouds across the sky.

People ran into their houses. Birds flew to their nests. Animals ran to find their hiding places.

Flash, flash came the lightning!

Boom, boom rolled the thunder across the sky!



The wind blew very hard. It broke branches from the trees.

"What a strong storm," said the children. "It will blow down the corn and other food plants," said Sue.

Sam and Sue were right. The wind does some things that are not good.



Mother said, "We need rain. The ground is very dry. The farmers need rain for their crops. We need rain for our gardens."

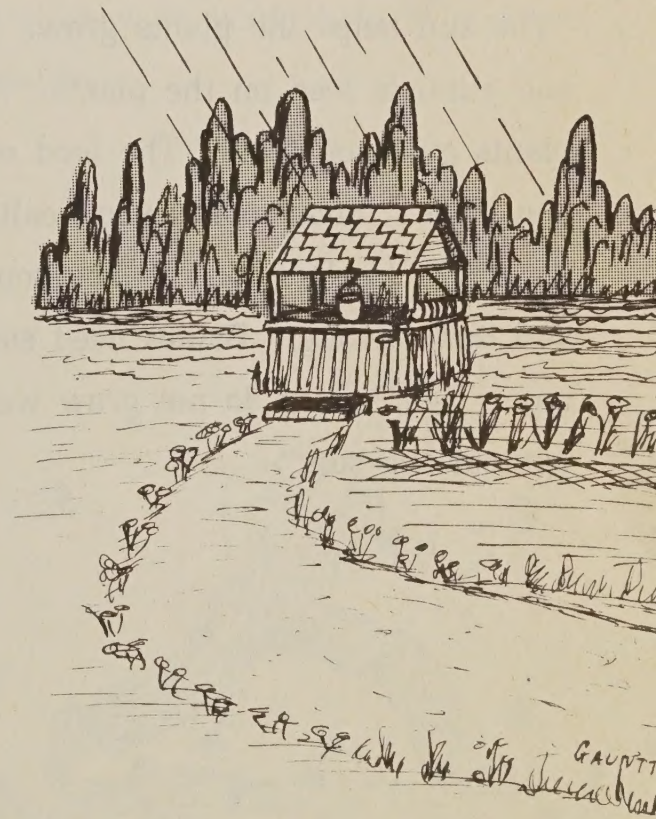
"Will the rain help the cows?" asked Sue.

"The rain will make the grass grow fast," said Mother. "The cows will eat the green grass. The cows make rich milk for boys and girls. Rich milk will make you strong and healthy."

"The rain gives us water to drink, too. Cows need water, too."

"We must have much rain to fill wells and springs," said Mother. "Most people who live on farms get their water from wells. Some people get their water from springs. Much water is needed to water the earth."

Mother stopped talking. Sam and Sue looked out the window. It had stopped raining. They clapped their hands. They ran out to play in the sun.



SUNSHINE

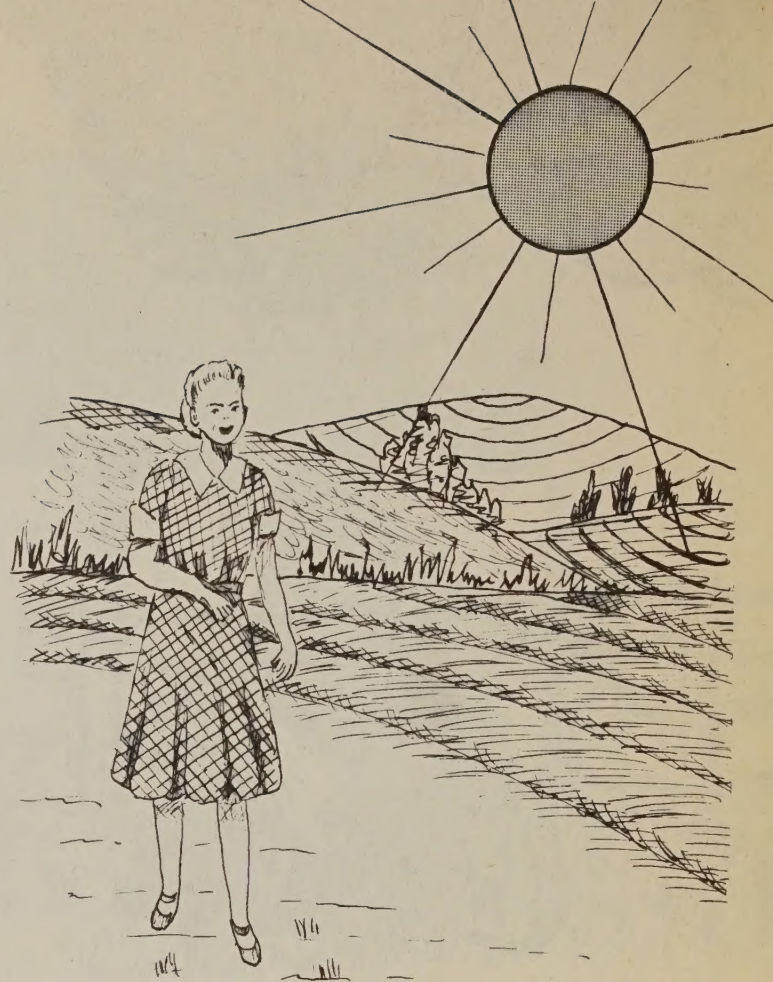
Sam and Sue went out to play.
Mother went out to watch the children
play.

"We like sunshine," said Sam. "We
like to run and play in the sunshine."

"Sunshine is good for us," said
Mother.

"How is sunshine good for us,
Mother?" asked Sue.

"The sun makes boys and girls strong.
The sun give us rosy cheeks," said Mother.
"The sun helps the plants grow. People
and animals feed on the plants. The
plants give you food. The food makes
you grow. Food makes you healthy.
The right kind of food makes your bones
and teeth strong. Babies need sunshine,
too. Their bones do not grow well
without the sun."





"Don't sick people need sun, too?" asked Sam.

"Yes," said Mother. "Sick people need sun, too. They often sit in the sun. The sun can help them to get well."



"Then everything needs sun," said Sue.

"Yes," said Mother. "Everything needs sunshine. All plants, people and all other animals need sunshine. We could not live without the sun. Plants can not live without the sun. Plants give us food."




Sam and Sue played and played in the sun.

They knew it would help to make them healthy.






MAKING A GARDEN

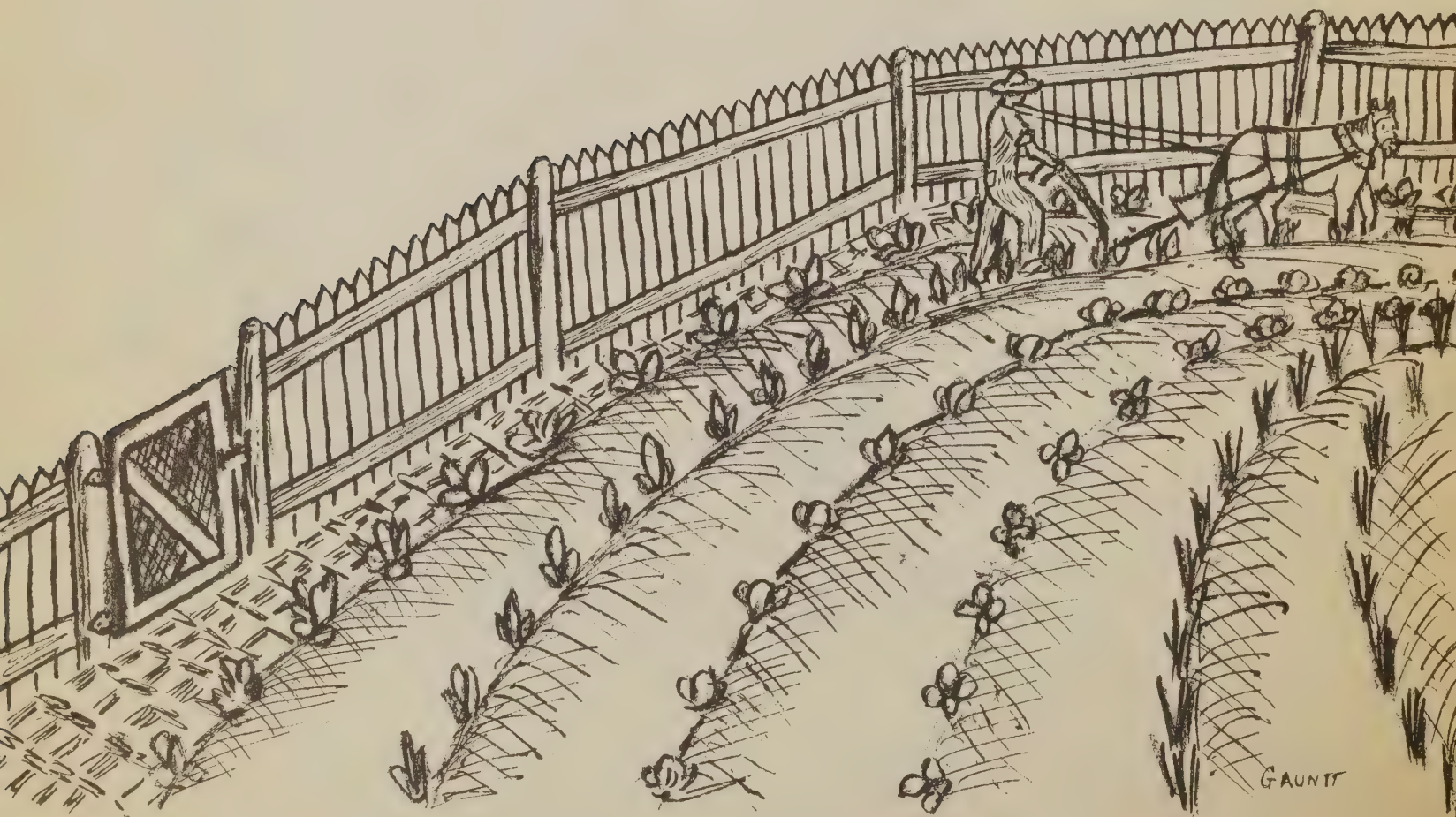


Sam and Sue want to make a garden.
“We want good soil for our garden,” said
Sam and Sue.



Father said, “The garden has good
soil. We have plowed under a good crop
of clover. The clover gives the plants
food. The clover makes the soil loose.
Loose soil holds water. Loose soil helps
plants to grow. The plants must have
other foods. Food is put in the soil by using
fertilizer. Food is put in the soil by plants.”

The garden is plowed deep. The garden
is plowed around the slopes. This will
help to keep our soil from washing away.

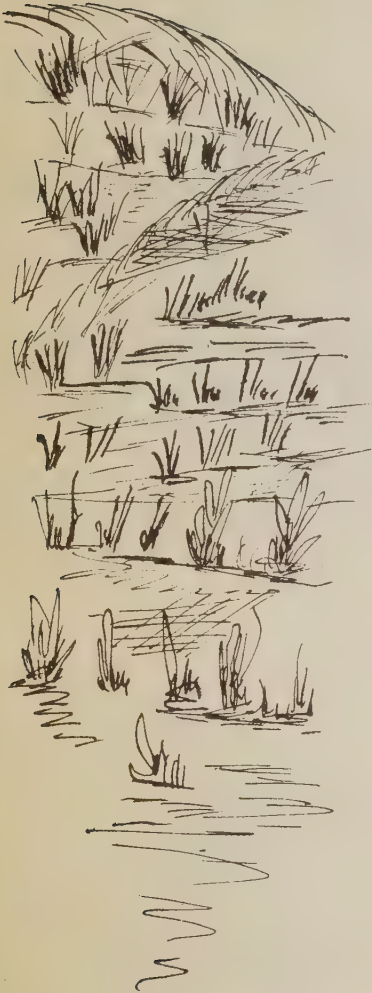


Cover crops are planted to hold the soil in place. Grass, trees and clover are cover crops.

Heavy rain will fall, and the soil will not wash away. The roots make little dams deep down in the earth. The roots hold the water as it goes into the ground. This water dissolves the food, for the plant. Plants cannot live without food.

A good garden should have loose soil. The roots make the soil loose. Loose soil will take up the water. Loose soil will hold the water. The water will not run off. This will keep the water for the plants. The roots get the water from the soil. Loose soil will help plants to grow, too.

The leaves make little cups to hold the water. The leaves make the water go slowly. The top soil will not wash away.





Sam and Sue went to work in their garden.

Sue found many worms in the garden.

"Sam, what shall we do with the worms?" asked Sue.

"Take them out," said Sam. "We don't want any worms in our garden."

So Sue put the worms in an old can.

By and by Father came to see the garden. He saw the can of worms.

"Why did you take the worms out of the earth?" he asked.

"We want a good garden," said Sam.



"But these are earthworms," said Father. "They are good for a garden. They dig their way around in the earth. They make the soil loose. The soil can breathe. It can breathe like people. All this helps the plants to grow. If you want a good garden, put the worms back."



Sam and Sue put the worms back into the ground again.

"I did not know that worms help make good garden," said Sam.



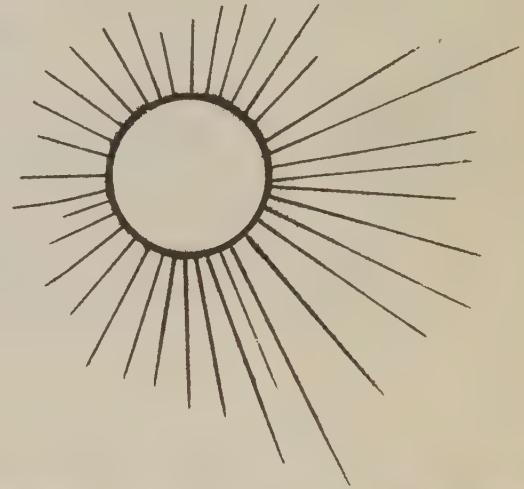
"Are all worms good for a garden?" asked Sue.

"No," said Father, "not all worms are good for a garden. We find earthworms in rich soil. Rich soil has decayed plants and animals. Earthworms are found only in good soil. Good soil will grow good plants," said Father.





The next day they had rain. "I am glad that we have our seeds planted," said Sue. "The rain will make the earth wet. That will help our seeds. Seeds must have water to grow."



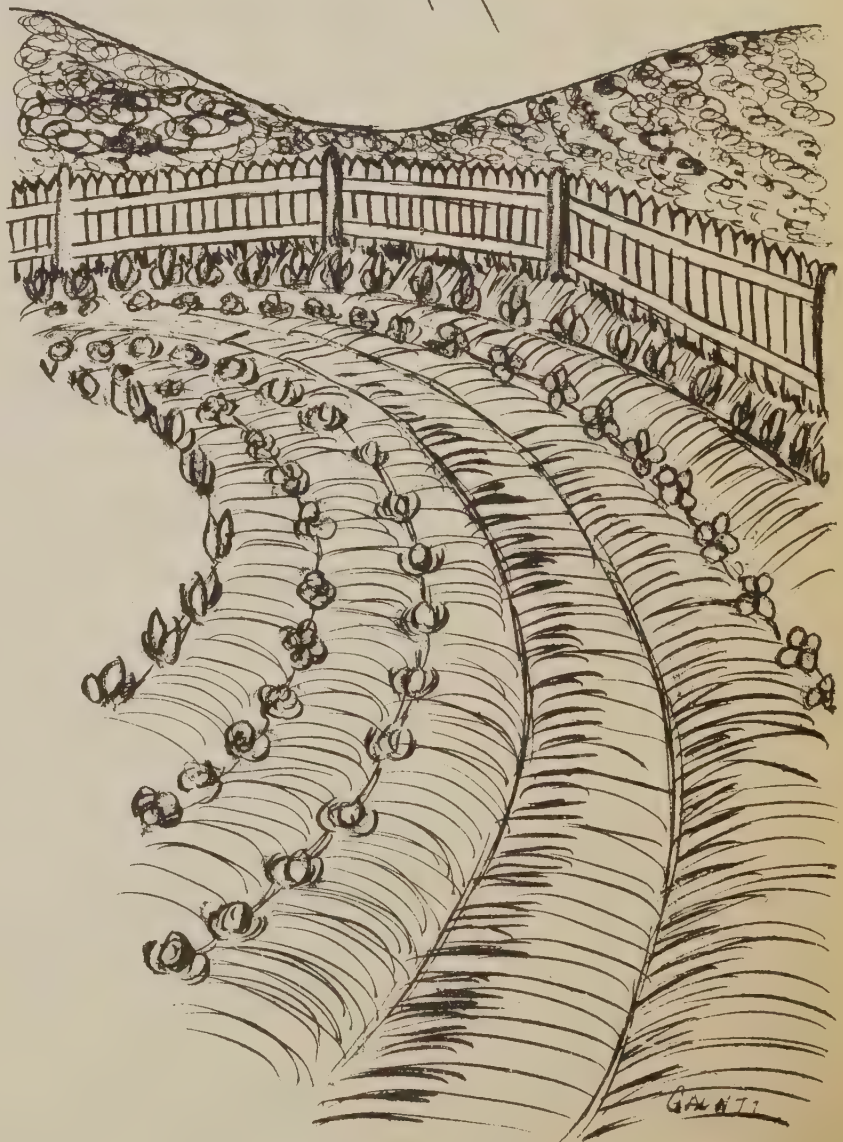
The next day the sun was shining.

"I am glad to see the sun," said Sam. "The sun is making the earth warm. That will help our seeds to grow."

Soil helps the plants to grow.

Water helps the plants to grow.

Sunshine helps the plants to grow.



After some time the seeds came up. Grass and weeds came up, too. Sam and Sue found the grass and weeds in the garden.

"If you are to have a good garden you must pull up the weeds," said Father. "They take water from the soil that the plants must have. The weeds grow fast. They leave no room for other plants."

Sam and Sue worked hard all the morning. There were many weeds to pull.



"Come and see our garden now, Father," said Sue. "The weeds are all up. We left the weeds to decay. They will give food to the plants. We will have a good garden. We will leave the weeds every year to decay. They will give food to the plants. We will have a good garden every year."

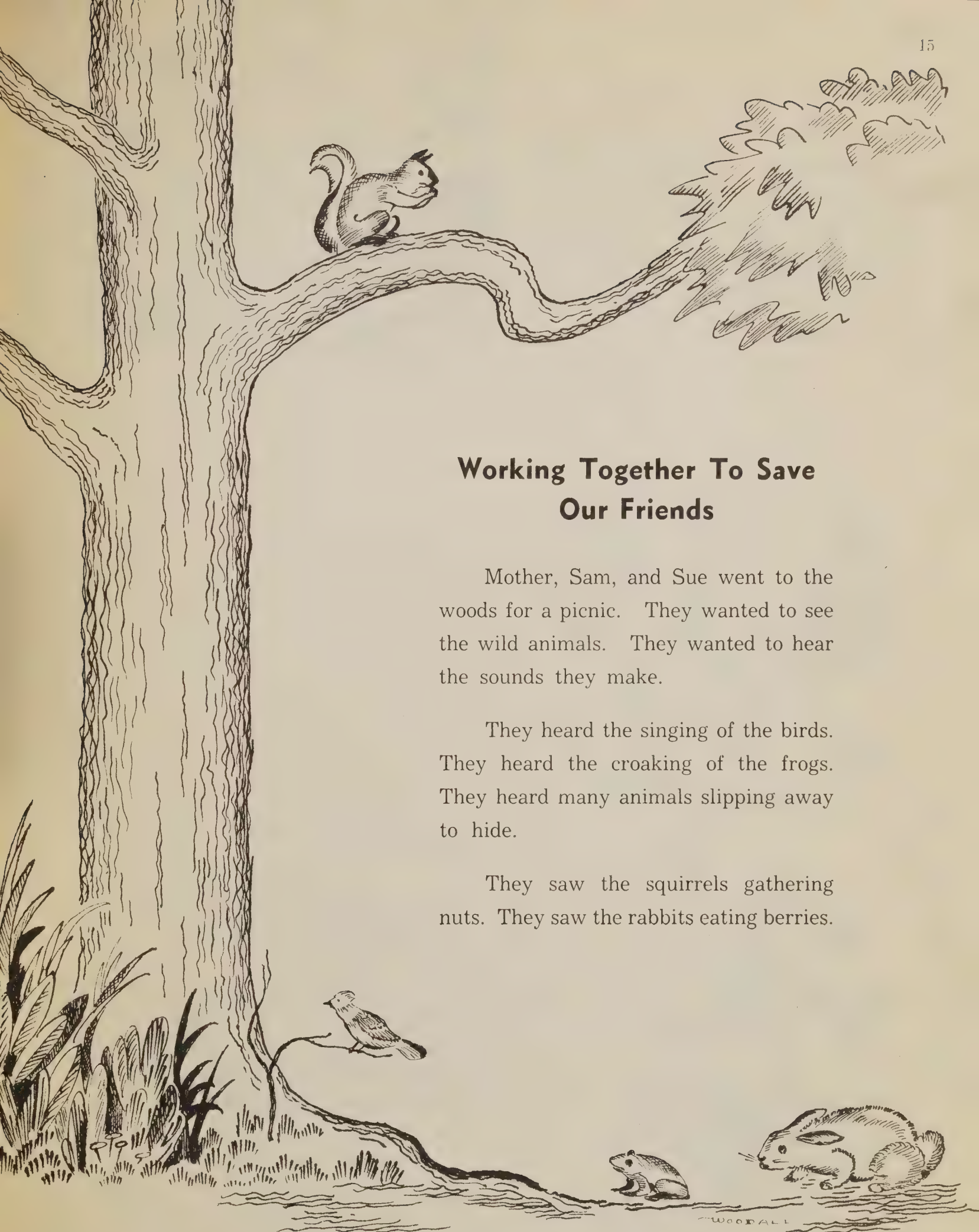


"We are keeping the soil rich," said Sam. "We have plowed the slopes round and round. We will cover the soil with plants and grass. They will add food to the soil. The rain cannot steal the soil away. Plants make the water walk off the land. Plowing round and round makes water walk off the land."

Sue said, "We will cover the soil with plants. The wind cannot steal it away."



Father and Sam planted the garden in cover crops. The cover crops grew and grew. They covered the soil. Father and Sam were proud of their cover crops. Sam said, "We want to use our garden many, many years."



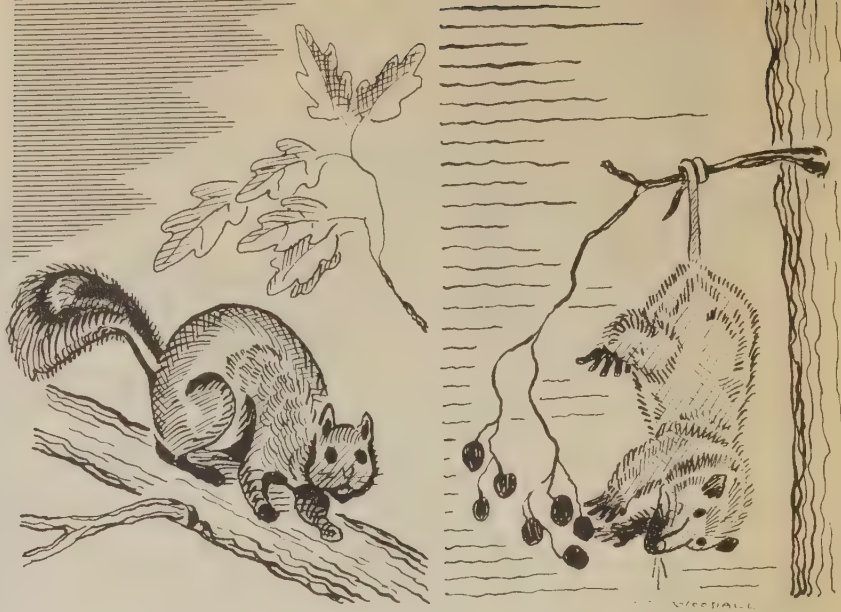
Working Together To Save Our Friends

Mother, Sam, and Sue went to the woods for a picnic. They wanted to see the wild animals. They wanted to hear the sounds they make.

They heard the singing of the birds. They heard the croaking of the frogs. They heard many animals slipping away to hide.

They saw the squirrels gathering nuts. They saw the rabbits eating berries.

"The trees protect the animals," said Mother. "They shelter the animals that live in the forests. Trees hide the animals from their enemies. They make a hiding place for their nests. The animal babies hide in the plants. Plants give sticks for the beaver's home. They furnish food for the beavers."



Plants give twigs for the birds' nests. Plants give food to animals. The animals give food to boys and girls. The animals need the forests."



"Oh, Mother," cried Sam. "The trees are beautiful."

"Yes," said Mother. "The trees are beautiful. The trees are useful to man. Trees help to save the top soil."

"How do they help save the top soil, Mother?" asked Sam.

Mother said, "The trees have big roots. These roots make little dams. Water that runs slow will not wash away the top soil."



The leaves fall on the ground.
They make little cups to hold the water.
The leaves will not let the water go
fast. The leaves and dead limbs fall to
the ground. They decay and make
more rich soil. Plants need rich soil.

“Forests are very useful,” said Sam.

Mother said, “Many workers make their living from forests. The forests help each of us. We want to keep our forests always growing. We select and cut only a part of our trees. Forest trees ripen like apples. We cut the ripe trees. They decay like an old apple. We cut the old trees.”

“We cut the ‘wolf’ tree. They are trees not good for lumber. They take the soil away from young trees. We thin out trees that crowd each other. The young trees will get more sun. They will grow faster.



RIPE TREES

SOON DECAY



SEED TREES

"We must leave some seed trees. Wind, water, birds and squirrels plant the seed from the mother trees."

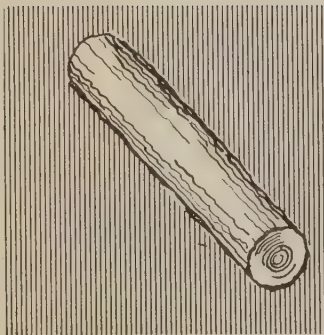


"We must all work to save the trees," said Sue.

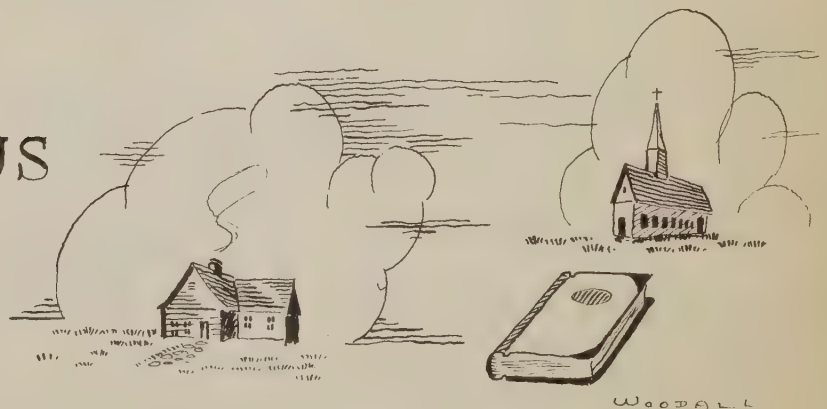
"How can we help?" asked Sam.

Mother said, "You can help in many ways. You must never cut the bark. You should never burn the forest. You should get others to help you save our trees."

"Wood has made a better and happier life for you," said Mother. "You live in a house made of wood. Your books and paper are made from wood. Your bed is made from wood. Many school houses and churches are made of wood."



GIVES US





Mother, Sam and Sue were ready to go home. Mother said, "The trees have given us shade for our picnic. We must pour water on our fire. Many fires are started by careless people on picnics. Campers and hunters start many forest fires. They throw lighted matches in the dry leaves."

Mother took the children to some burned woods.

"Oh, look Mother, at all these black stumps," said Sam.

"Yes," said Mother. "This forest has been visited by an enemy. Someone has been careless. A fire has been here. The fire has burned the young plants and leaves. It has burned the big trees. It has burned the pine straw."



"Why is the brook so muddy?" said Sue.

"The rain has washed the top soil into it," said Mother.

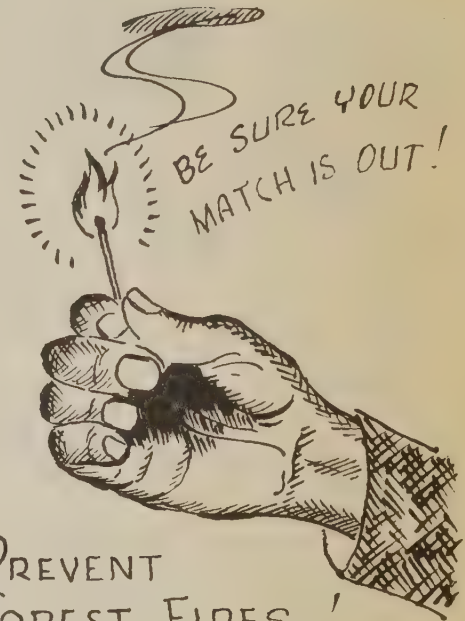


"The leaves and straw are gone. The trees are gone. The young plants are gone. There is nothing to hold the soil. Bare soil is one cause of erosion. Bare soil causes floods.



Many young animals cannot run fast. Many birds cannot fly away. They are burned up. Many animals will starve. Seeds, nuts and berries which gave them food are gone."

"People should not start forest fires," said Mother. "Animals and birds will not leave the woods if there are no forest fires. Their homes will not be burned. Seed trees and baby trees will not be destroyed. The young



trees can grow. Young trees will give us more wood when they are grown. Plants and trees will hold the water. We will not have many floods. Roots of the trees will hold the soil. This will help save our soil."



Mother, Sam and Sue returned from the picnic. They found Father in the yard.

“Oh, Father,” said Sam. Let’s plant lots of trees. We learned about trees on our picnic today. We learned how they help us. We learned how they help the animals.”

“Yes,” said Father. “A Wise Farmer plants many trees. I will tell you a story of a Foolish Farmer. Many years ago I was that Foolish Farmer.

Spring came. I planted cotton.

I planted cotton on the land every year.

I made very little money. I had many bad years.

I was a Foolish Farmer. I did not cover my top soil in winter. I did not cover my top soil in summer. I had no cover on my fields. I did not plow around and around the slopes.

Autumn came. The frost killed the cotton stalks. The frost killed the grass. The fields had no cover crops.



The rains came. The water came down. The water made a stream. It ran down the hill. I had no cover crops. I had no cover crops to stop the water. All the top soil went down the stream.

Down the stream went the top soil. The water was muddy. It was stealing away the top soil.



I was a careless farmer. A fire burned my forest. It burned the trees. It burned away the leaves. It burned away the small trees.

The fire burned the wild animals. It burned their homes. It burned their food. I did not put out small trees.



I was sad. My land was wearing out. Our house was wearing out. We had little food. We were not strong. We needed more food.

Mother was very sick. We had no money for a doctor. We had no money for the church. We had no money for the school.

One day I said to Mother, "We will leave this farm. We will go to another farm. We cannot make a living here."

"No," said Mother. "We have no other farm where we can move."

Then I said, "I will go see the County Agent. He will help me be a Wise Farmer."

"Oh, Father," said Sam. "Tell us how you learned to be a Wise Farmer."

"Yes, I will," said Father. "I went to see the County Agent. The County Agent came back to the farm. He looked at the soil. The County Agent shook his head."



"We must plant trees," said the County Agent. "We must plant many, many trees."

I planted trees. I planted pine trees on some of my hillsides. I planted many trees. They helped hold the top soil.

The Soil Conservation Man came to the farm. He looked at the red gullies. He looked at the bare hillsides. He knew I had to work fast. Muddy streams were working fast.

The Soil Conservation Man said, "You must plant cover crops. You must buy cows to eat the cover crops. You must plow around and around."



I planted cover crops. I planted clover. I planted alfalfa. I planted lespedeza. I wanted cover for my soil.

I bought cows to eat the cover crops. I bought milk cows. I bought beef cows.

I wanted to cover my soil in the winter. I wanted to cover my soil in the summer.



I said, "I will plant kudzu on my other hillsides. It will cover my soil. The roots will hold the soil. The leaves will make food for my cows."

The cows gave milk for our food. The cows gave milk to sell. We got butter from the milk. We got cheese from the milk. We got butter and cheese to sell.

I looked at my green fields and was happy. I looked at my cows and was happy.



I needed corn for my pigs. I needed corn for my cows. I needed corn for my chickens.

I plowed around and around. I planted corn in the rows. I planted cover crops between the rows.

The fields grew food for all of us. The pigs grew large and fat. They gave us meat to eat. They gave us meat to sell.

We had more milk than we could use. We had more meat than we could use. We sold meat. We sold chickens and eggs. We had many things to sell. We were able to save money. We were very happy.



Mother and I wanted a new house. Mother and I wanted a new barn.

I had many big trees on my farm. The trees had never been burned. I cut some of the large trees. I had many trees left.

I made lumber from the trees I cut. We used the lumber for a house. We used the lumber for a barn.



I wanted to have fun on my farm. I wanted to grow more food on my farm.



I said, "I will make a fish pond. We will have fun fishing. We can use the fish for food.



The County Agent got the fish from the State Fish Hatchery. He taught me how to put food into the water. The food was for water plants. The fish would eat water plants.



The fish pond helped us. It helped us to have food. It helped the family to have fun on the farm. It gave us water for our garden. The garden gave us food to eat. The garden gave us food to sell.



The County Agent came back to my farm. He smiled. He did not shake his head from side to side.

The County Agent nodded his head up and down. He was pleased with the farm.

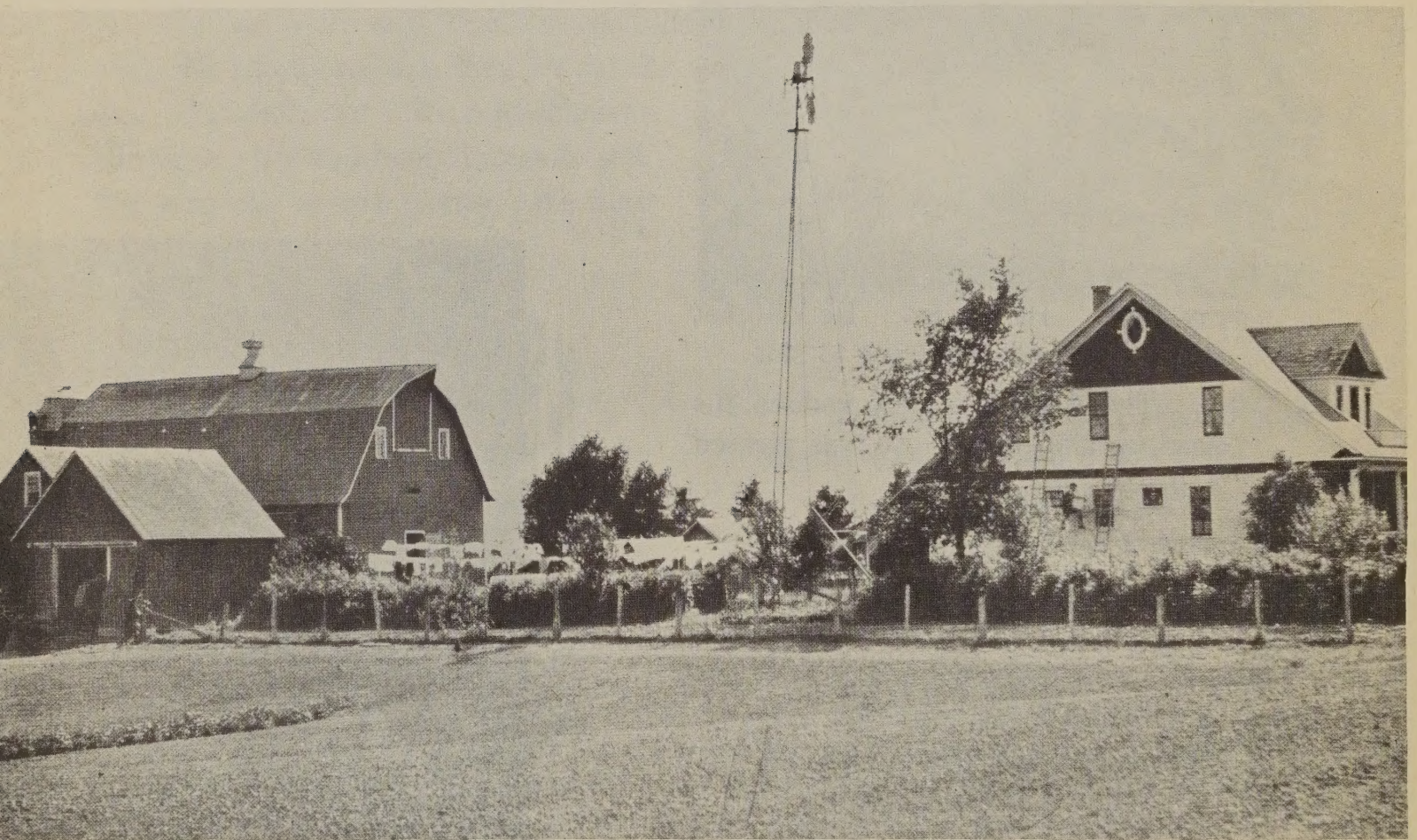


“Oh, Father,” said Sam. “I am so glad you are a Wise Farmer.”

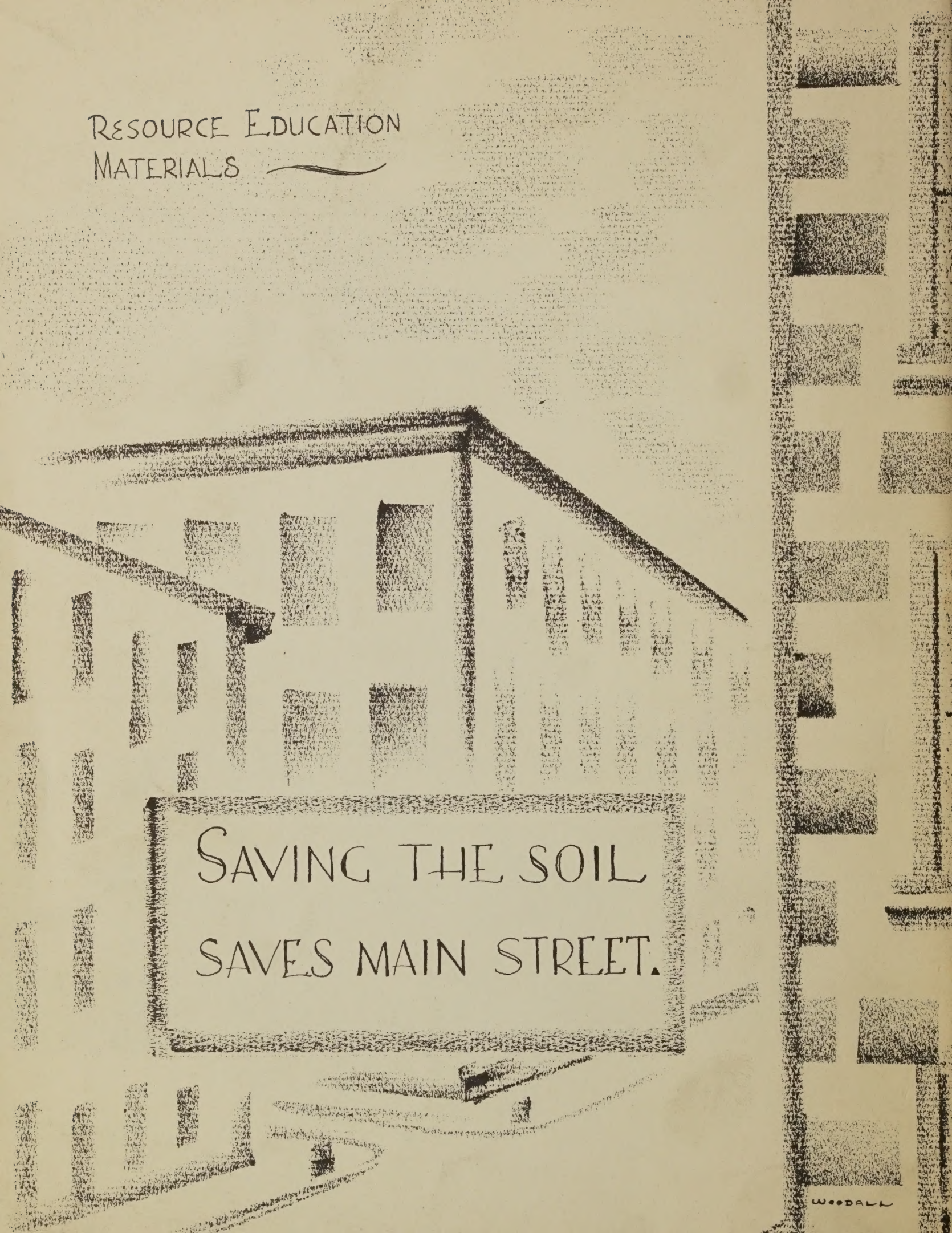
“Yes,” said Sue. “Now we have a pretty home.”

“And a good barn,” said Sam.

“Yes,” said Father. “Everyone should be a Wise Farmer. Wise Farmers have better homes. Wise Farmers can help the churches. Wise Farmers can help the school. Wise Farmers can help the neighbors.”



RESOURCE EDUCATION
MATERIALS



SAVING THE SOIL
SAVES MAIN STREET.